

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Akihiro TERADA, et al.

Serial No.

Group Art Unit:

Confirmation No.

Filed: September 28, 2001

Examiner:

For: PRESSING DEVICE

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

Prior to examination of the above-identified application, please amend the claims as follows.

The following amendments and remarks are respectfully submitted. Reconsideration of the claims is respectfully requested.

IN THE CLAIMS:

10. The pressing device according to claim 1, wherein a linear motor is used in place of said servomotor, and said linear motor also serves as said linear movement mechanism.

11. The pressing device according to claim 4, wherein a desired pressing force is obtained by controlling the current of said servomotor.

12. The pressing device according to claim 1, wherein said working tool mounting section is provided at a position on the fixed side of the movement mechanism of said pressing device.

13. The pressing device according to claim 1, wherein said working tool mounting section is provided at a position on the moving side of the movement mechanism of said

pressing device.

14. The pressing device according to claim 1, further comprising an observer for estimating a pressing force of said roller and means for carrying out force feedback control based on a commanded pressing force and an estimated pressing force estimated by said observer.

15. The pressing device according to claim 1, wherein said working is laser beam machining.

16. A working robot in which said pressing device described in claim 1, is installed at the distal end of a robot arm.

18. The working robot according to claim 1, wherein a robot teaching pendant is provided with means capable of inputting at least any one of the position, speed, and pressing force of said roller support frame of the pressing device and the distance between said working tool mounted on said working tool mounting section and said plate portion.

19. The working robot according to claim 1, wherein at least any one of the position, speed, and pressing force of said roller support frame of the pressing device and the distance between said working tool mounted on said working tool mounting section and said plate portion is commanded by a robot program command.

REMARKS

In accordance with the foregoing, claims 10-16 and 18-19 have been amended. Claims 1-19 are pending and under consideration.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE CLAIMS:**

10. The pressing device according to claim 1 [or 4], wherein a linear motor is used in place of said servomotor, and said linear motor also serves as said linear movement mechanism.

11. The pressing device according to [any one of claims 1, 4 and 7] claim 4, wherein a desired pressing force is obtained by controlling the current of said servomotor.

12. The pressing device according to [any one of claims 3, 6 and 9] claim 1, wherein said working tool mounting section is provided at a position on the fixed side of the movement mechanism of said pressing device.

13. The pressing device according to [any one of claims 3, 6 and 9] claim 1, wherein said working tool mounting section is provided at a position on the moving side of the movement mechanism of said pressing device.

14. The pressing device according to [any one of claims 1, 4 and 7] claim 1, further comprising an observer for estimating a pressing force of said roller and means for carrying out force feedback control based on a commanded pressing force and an estimated pressing force estimated by said observer.

15. The pressing device according to [any one of claims 1, 4 and 7] claim 1, wherein said working is laser beam machining.

16. A working robot in which said pressing device described in [any one of claims 1, 4 and 7] claim 1, is installed at the distal end of a robot arm.

18. The working robot according to claim [16 or claim 17] 1, wherein a robot teaching pendant is provided with means capable of inputting at least any one of the position, speed, and pressing force of said roller support frame of the pressing device and the distance between said working tool mounted on said working tool mounting section and said plate portion.

19. The working robot according to claim [16 or claim 17] 1, wherein at least any one of the position, speed, and pressing force of said roller support frame of the pressing device and the distance between said working tool mounted on said working tool mounting section and said plate portion is commanded by a robot program command.